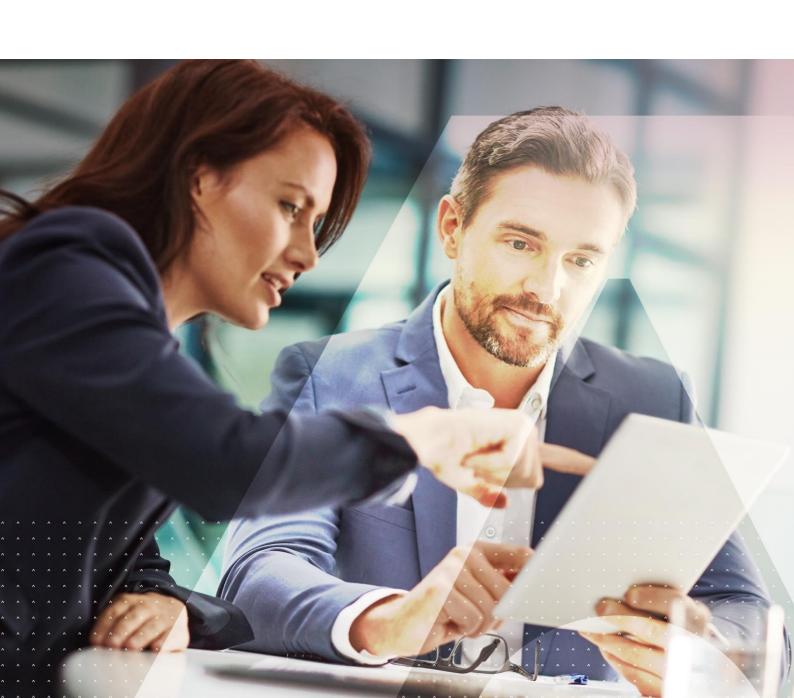# payShield 10K Product Options

An overview of the sales order options

Overview

When you place an initial order for a payShield 10K, two mandatory line items are required on the sales order form, one in each of the following categories:

> Hardware

> Package

payShield Manager smart cards and/or LMK component smart cards also need to be ordered if you are deploying Thales payment HSMs for the first time.

In addition there are two optional categories that supplement the core product functionality:

> Optional licenses

> Accessories

The Software details that you need to confirm with the order are as follows:

> To receive the latest base software available, please add the phrase '*latest software*' as a note on the order

> If you require a different base or custom software then the appropriate firmware number (in the format HFnnnn-00nn) must be specified as an additional note on the order form

> Warning – your order may incur a processing delay if you do not clarify (using one of the options above) the software you require.

After initial deployment it is also possible to upgrade the product in two distinct ways to supplement the initial functionality:

> Package upgrade

> Option license upgrade

payShield 10K Packaging Structure		
Hardware	PS10-S (payShield 10K Ethernet Hardware Platform)	
Software	Standard Base Software Platform HF1500-00nn (v1.x)	
Packages	PS10-CLA-L (25 cps) PS10-CLA-S (60 cps) PS10-CLA-M (250 cps) PS10-CLA-H (1000 cps) PS10-CLA-X (2500 cps)	PS10-PRM-L (25 cps) PS10-PRM-S (60 cps) PS10-PRM-M (250 cps) PS10-PRM-H (1000 cps) PS10-PRM-X (2500 cps)
Package Upgrades	PS10U-CLA-L2S (25 to 60 cps) PS10U-CLA-S2M (60 to 250 cps) PS10U-CLA-M2H (250 to 1000 cps) PS10U-CLA-H2X (1000 to 2500 cps) PS10U-CLA2PRM (package upgrade)	PS10U-PRM-L2S (25 to 60 cps) PS10U-PRM-S2M (60 to 250 cps) PS10U-PRM-M2H (250 to 1000 cps) PS10U-PRM-H2X (1000 to 2500 cps)
Optional Licenses	PS10-LIC-RMGT (Remote payShield Manager license) PS10-LIC-LMKx2 (payShield LMKx2 license) PS10-LIC-LMKx5 (payShield LMKx5 license) PS10-LIC-LMKx10 (payShield LMKx10 license) PS10-LIC-LMKx20 (payShield LMKx20 license) PS10-LIC-VDSP (Visa Data Secure Platform) PS10-LIC-LEGACY (miscellaneous legacy commands)	
Optional License Upgrades	PS10U-LMK2-5 (Upgrade from 2 LMKs to 5 LMKs) PS10U-LMK5-10 (Upgrade from 5 LMKs to 10 LMKs) PS10U-LMK10-20 (Upgrade from 10 LMKs to 20 LMKs)	

The sections below contain additional details of the order code options available in each of the categories.

Hardware models

The following hardware model is currently supported for the payShield 10K platform - further hardware variants may be introduced in the future.

Order Code	Hardware details
PS10-S	payShield 10K Ethernet hardware platform, dual 1 Gbps Ethernet host interface connections

Software variants

In addition to the Standard Base Software Platform, payShield 10K can be ordered with custom software. The following software variants are currently available:

Standard Base Software Platform	Other Software
HF1500-00nn (v1.x code base)	Please contact Thales for further information

Packages available

A range of packages at various performance levels is available.

Package	Details
Classic	Standard processing package containing all the core functionality necessary to route and validate payment transactions. • Key Management • Magnetic Stripe Issuing • Magnetic Stripe Transaction Processing • EMV Transaction Processing • Data Protection
Premium	Premium issuing and processing package containing all core functionality available for the payShield 10K platform. • Premium Key Management *(includes AS2805 and payment credential issuing key management not available in the Classic package*) • Magnetic Stripe Issuing • Magnetic Stripe Transaction Processing • EMV Chip, Contactless & Mobile Issuing (*not available in the Classic package*) • EMV Transaction Processing • Premium Data Protection (*includes User Authentication functions not available in the Classic package*)

Only one package configuration from the table below can be applied to any given HSM at any point in time. It is possible to upgrade to a different package and/or performance permutation after initial deployment.

Order Code	Description
PS10-CLA-L	Classic package – 25 calls per second (cps)
PS10-CLA-S	Classic package – 60 cps
PS10-CLA-M	Classic package – 250 cps
PS10-CLA-H	Classic package – 1000 cps
PS10-CLA-X	Classic package – 2500 cps
PS10-PRM-L	Premium package – 25 cps
PS10-PRM-S	Premium package – 60 cps
PS10-PRM-M	Premium package – 250 cps
PS10-PRM-H	Premium package – 1000 cps
PS10-PRM-X	Premium package – 2500 cps

The calls per second or cps rating refers to the number of distinct functional calls that the host application can make to the host interface each second. This could be functions all of one type of a mixture of different types including:

> PIN block translations per second using a Key Block compliant key (e.g. 168 bit 3DES)

> RSA signatures using up to 4096 bit keys

Package upgrades

After initial deployment it is possible to migrate to a higher value package in terms of functionality and/or performance. The following table provides details of the options currently available:

Order Code	Upgrade Details
PS10U-CLA2PRM	Upgrade from the Classic package to the Premium package – the same performance level is maintained
PS10U-CLA-L2S	Classic package performance upgrade - 25 to 60 cps
PS10U-CLA-S2M	Classic package performance upgrade – 60 to 250 cps
PS10U-CLA-M2H	Classic package performance upgrade - 250 to 1000 cps
PS10U-CLA-H2X	Classic package performance upgrade - 1000 to 2500 cps
PS10U-PRM-L2S	Premium package performance upgrade - 25 to 60 cps
PS10U-PRM-S2M	Premium package performance upgrade – 60 to 250 cps
PS10U-PRM-M2H	Premium package performance upgrade - 250 to 1000 cps
PS10U-PRM-H2X	Premium package performance upgrade - 1000 to 2500 cps

Optional licenses

To supplement the functionality available in the packages, various optional licenses are available:

Order Code	License Details
PS10-LIC-LMKx2	Multiple LMKx2 cryptographic isolation
PS10-LIC-LMKx5	Multiple LMKx5 cryptographic isolation
PS10-LIC-LMKx10	Multiple LMKx10 cryptographic isolation
PS10-LIC-LMKx20	Multiple LMKx20 cryptographic isolation
PS10-LIC-RMGT	Remote payShield Manager
PS10-LIC-VDSP	Visa Data Secure Platform
PS10-LIC-LEGACY	Miscellaneous commands to provide backwards compatibility with legacy applications and security processes

Only one of the various Multiple LMK optional licenses can be applied to any given HSM. In the event that the number of LMKs required to be supported exceeds the initial license purchased, the appropriate optional license upgrade detailed in the next section should be ordered.

Please note that the Remote payShield Manager license (PS10-LIC-RMGT) is not required if payShield Manager is only used in local mode.

Optional license upgrades

The following upgrade options are available to increase the multiple LMK capacity of any individual HSM:

Order Code	Upgrade Details
PS10U-LMK2-5	Multiple LMK upgrade from LMKx2 to LMKx5
PS10U-LMK5-10	Multiple LMK upgrade from LMKx5 to LMKx10
PS10U-LMK10-20	Multiple LMK upgrade from LMKx10 to LMKx20

payShield Manager

The payShield Manager local mode capability is included automatically as part of the base package. If you wish to operate payShield Manager in remote mode, you will need to order the 'Remote payShield Manager' optional license (PS10-LIC-RMGT) together with at least one smart card reader and a suitable pack of smart cards (minimum recommended quantity is 30 smart cards). The various accessories for use with the local or remote mode of payShield Manager are summarized in the table below.

Order Code	payShield Manager Accessory Details
HSM-RMGT-KIT1	Starter kit for payShield Manager comprising of 2 smart card readers and 30 smart cards
HSM-RMGT-RDR2	Smart card reader required for use with payShield Manager – a minimum of one reader is required for each remote location that you intend to use for remote management
HSM-RMGT-PM6	Pack of 6 smart cards for use with payShield Manager
HSM-RMGT-PM30	Pack of 30 smart cards for use with payShield Manager
HSM-RMGT-PM100	Pack of 100 smart cards for use with payShield Manager

Accessories

The table below provides details of the main accessories and replacement parts that are available for the payShield 10K HSM.

Order Code	Description	Notes
PS10-CARD6PK	LMK Component Cards (6 blank smart cards)	LMK Component smart cards are required for use locally when using the Console instead of payShield Manager. These are identical to the LMK smart cards supplied with payShield 9000 *and are NOT compatible with payShield Manager*.
PS10-U2PC	USB to Parallel Centronics	One of these cables is required if the payShield 10K is to be used for secure printing (e.g. PIN Mailers or Key Components).
PS10-U2P25	USB to Parallel 25 pin	
PS10-PWRCORD-1	Power cord Qty 2 - US	Order these power cords when a country-specific power cord instead of the IEC Male to Female power cords supplied with the payShield 10K is required. *These parts can only be ordered together with the payShield 10K – they are not available separately*
PS10-PWRCORD-2	Power cord Qty 2 - UK	
PS10-PWRCORD-3	Power cord Qty 2 - Continental European	
PS10-PWRCORD-4	Power cord Qty 2 - Australia	
PS10-SPARES-KIT	payShield 10K Spares Kit	The payShield 10K Spares Kit consists of: > Replacement FAN Tray x 2 > Replacement PSU x 1
PS10-PSU	payShield 10K Replacement PSU	Spare replacement PSU
PS10-FAN	payShield 10K Replacement Fan Tray	Spare replacement Fan Tray

Comparison with payShield 9000

The table below summarizes the key differences between payShield 9000 and payShield 10K to assist existing users of payShield 9000 in choosing which product options to select with the newer model.

Category	Key Differences
Hardware models	With payShield 9000 the performance level is bundled with the hardware model resulting in multiple hardware order code permutations. payShield 10K adopts a slightly different approach by decoupling the performance level from the hardware model and associating it with the package instead.
Performance levels	payShield 10k offers higher performance across all comparable models. At the low end the new entry level is 25 'tps' (up from 20 tps) and at the high end the current maximum is 2500 'tps' (up from 1500 tps). Performance now is ordered as an integral part of the package rather than the hardware.
Packages	Fewer package options are available on the payShield 10K to reflect the fact that the vast majority of payShield 9000 customers purchase the 'Premium' package.
Optional licenses	All functionality has been retained but some additional optional licenses have now been bundled as part of the 'Premium' package. ***Please be aware that the 'legacy' optional licence (PS10-LIC-LEGACY) contains over 100 miscellaneous commands that previously appeared in some of the payShield 9000 base packages – they do not appear in any of the payShield 10K packages. It is advisable to double check the list of host commands in the 'payShield 10K Legacy Host Commands' document (available on request from Thales) to determine whether or not you require this license.***
Software and license upgrades	No change – the ability to upgrade the performance, package, Multiple LMKs and add optional licenses at any time is retained
LMK cards	Blank LMK cards are no longer supplied with each new HSM purchased – you may need to order one or more packs of 6 cards (PS10-CARD6PK). ***Please note that this type of smart card is required for the Console interface.***
Rail kits	A rail kit is now automatically included as part of the payShield HSM hardware supplied – with payShield 9000 the equivalent rail kit was a separate item at additional cost. The rail kit used for payShield 9000 is not compatible with payShield 10K and vice versa.

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